

## PATENT SPECIFICATION

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## COMPLETE SPECIFICATION

## A Closure for Jars, Bottles and similar Receptacles

We, MAURICE MATTHU, 3, rue de la Bibliotheque, Gent, Belgium, a Belgian subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention refers to a closure for secure and hermetic sealing particularly applicable to milk jars, bottles and like receptacles.

According to the invention a closure for jars, bottles and similar receptacles comprises a deformable rubber or like plug, of slightly greater diameter than the neck of the receptacle with which it is to be used, and having a hollow cup-shaped body part with cylindrical inner and outer walls, a formation such as a flange at the upper open end thereof and a flat base closing its lower end, the plug being adapted to be inserted into the neck of the receptacle so as to displace air from above the contents.

One of the features of the invention is that hermetic sealing is obtainable while at the same time a partial vacuum is created in the vessel thus constituting a considerable advantage over all other existing methods through the simplicity of its manufacture and its easy application.

Perishable goods or products, such as milk for example, may, by the use of a closure made in accordance with the invention, be protected from the air so as to be more easily preserved. In addition, the use of this closure for milk jars or bottles prevents churning during transport.

The closure, made in accordance with this invention, is located inside the neck or mouth of the receptacle. The closure may be inserted until its bottom engages the contents, thus ensuring that the contents are protected from contact with the air even in the event of the closure being applied by an inexperienced person.

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In order to render more comprehensible the various characteristics in accordance with the invention, two embodiments are described hereafter solely by way of illustration, with reference to the figures in the accompanying drawing in which:—

Fig. 1 is an elevation of one example of a closure made in accordance with the invention;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is a plan view of Fig. 1;

Fig. 4 is a sectional view in perspective of another example of closure in accordance with the invention.

In accordance with the embodiment of the invention shown in Figs. 1 to 3, the closure consists of a hollow cup-shaped body 1 having cylindrical inner and outer walls, the open upper end of which body part is surrounded by an outer flange 2. The body and flange are in one piece made from a flexible or elastic substance such as rubber for example, treated in such a way as to leave neither taste nor odour. Other flexible and resilient substances than rubber may be used especially as a closure for bottles.

The closure is adapted to be located inside of the neck or mouth of the receptacle, the diameter of the body being slightly larger than that of the neck so as to hermetically seal the receptacle. On the device being placed in position, the body displaces the air which is in the receptacle above the contents, such air being forced out, its escape being permitted by reason of the elasticity of the closure.

For preference, the receptacle should be filled to a level corresponding to the anticipated level of the bottom of the body of the closure in the neck of the receptacle, so that all the air may be expelled before the flange comes to rest on the edge of the receptacle.

It is understood that the deformation of the body to permit such escape of air from

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the receptacle is not of a permanent nature and that the closure resumes its normal position against the neck of the receptacle immediately after the evacuation of the

5 air, in such a way as to attach itself frictionally against the inside of the neck, remaining in position through the resilient exertion of outward pressure, a partial vacuum being set up in the receptacle.

10 In Fig. 4 there is shown a modified form of the closure in which the flange 2<sup>1</sup> is located on the inside of the body 1. The flange, which may contain a reinforcing ring, has as its principal object, the  
15 giving of greater stiffness to the edge of the body and also renders it easier to take hold of the closure for withdrawing it from the receptacle.

It goes without saying that in certain cases the flange may be replaced by  
20 handles which may possibly be formed by projections arranged towards the upper part of the body.

One advantage of the flange situated  
25 inwardly of the body is that the insertion of the closure into a receptacle is not limited but may continue until the moment that its bottom reaches the upper part of the contents of the bottle or jar  
30 in such a way that the filling of the receptacle does not require any degree of accuracy.

The closure device while being supple and flexible resists however perfectly well  
35 any shock or shaking of the receptacle equally as well as any other stopper, and can be taken out easily whenever desired by flexing a small part of the flange and body inwardly and away from the neck of  
40 the receptacle, the air which enters at such location being remote from the hollow interior of the body and therefore not contaminated by anything which may have collected therein.

45 Having now particularly described and

ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim

1. A closure for jars, bottles and similar receptacles comprising a deformable rubber or like plug, of slightly greater  
50 diameter than the neck of the receptacle with which it is to be used, and having a hollow cup-shaped body part with cylindrical inner and outer walls, a formation,  
55 such as a flange at the upper open end thereof and a flat base closing its lower end, the plug being adapted to be inserted into the neck of the receptacle so as to displace air from above the contents. 60

2. A closure for jars, bottles and similar receptacles according to Claim 1, further characterised in that the flange of said  
65 body part is external and adapted to engage with the end of the receptacle so as to locate the closure thereon, and limit the degree of introduction of the body into the neck of the receptacle.

3. A closure in accordance with Claim 1 characterised in that the said flange is  
70 located on the inner surface of the body in such a manner as not to limit the degree of the introduction of the body into the neck of the receptacle, substantially as and for the purpose set forth. 75

4. A closure in accordance with Claim 1, characterised in that the upper edge of the body is provided with projections to facilitate the taking hold of and the raising of the closure device, substantially as  
80 and for the purpose set forth.

5. A closure, constructed, arranged and adapted for use substantially according to any of the forms herein described and illustrated. 85

Dated this 3rd day of March, 1945.

For the Applicant,

WILSON, GUNN & ELLIS;

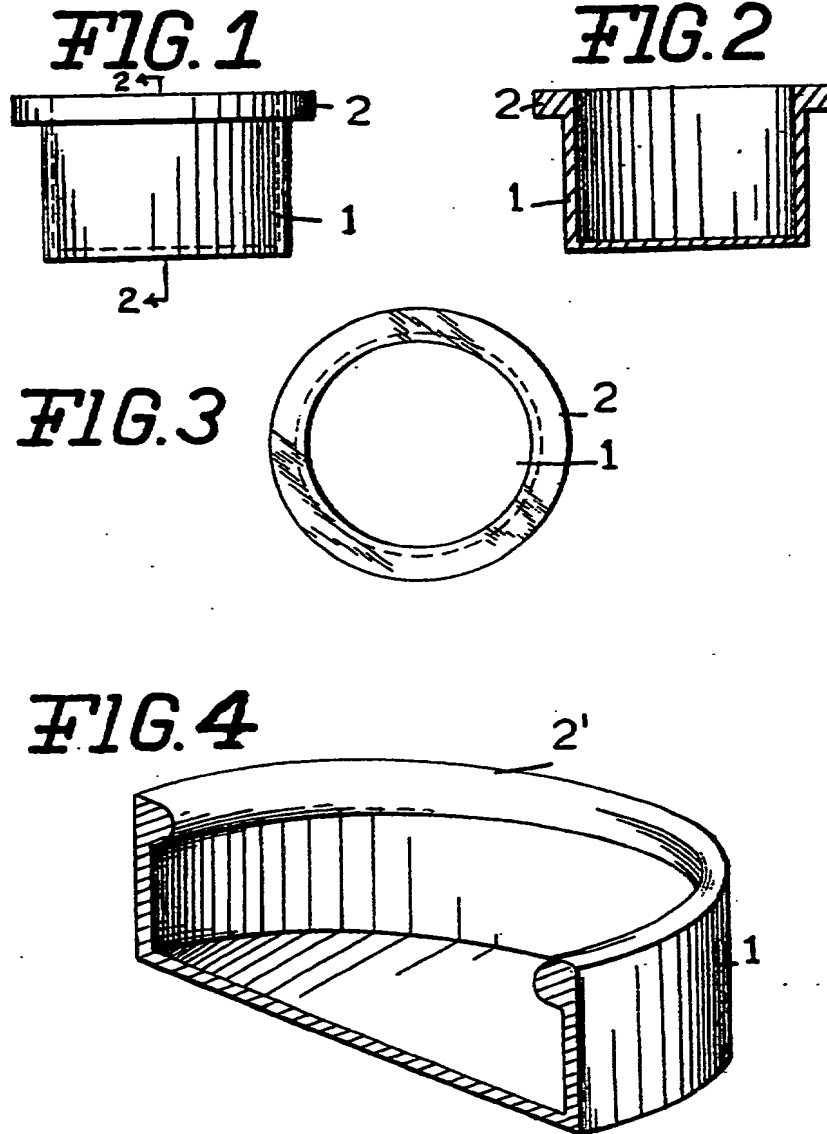
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[This Drawing is a reproduction of the Original on a reduced scale.]